The agencies that participate in the NITRD Program are:

AHRQ ....Agency for Healthcare Research and Quality

DARPA ....Defense Advanced Research Projects Agency

DOE/NNSA ....Department of Energy/National Nuclear Security Administration

DOE/SC...............DOE/Office of Science

EPA ....Environmental Protection Agency

NASA ....National Aeronautics and Space Administration

NIH ....National Institutes of Health

NIST ....National Institute of Standards and Technology

NOAA ....National Oceanic and Atmospheric Administration

NSA ....National Security Agency

NSF ....National Science Foundation

OSD ....Office of the Secretary of Defense

Other Federal agencies are welcome to participate in NITRD activities; the following agencies are doing so in FY 2005:

AFRL...................Air Force Research Laboratory
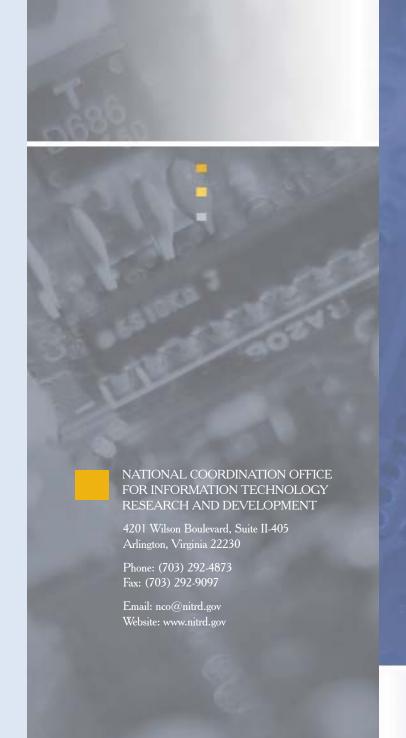
DoD/HPCMPO   Department of Defense/High Performance Computing Modernization Program Office

DFAA...................Federal Aviation Administration

FDA ....Food and Drug Administration

GSA ....General Services Administration

ONR....................Office of Naval Research

NATIONAL COORDINATION OFFICE FOR INFORMATION TECHNOLOGY RESEARCH AND DEVELOPMENT

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THE
U.S. GOVERNMENT'S
NETWORKING AND
INFORMATION TECHNOLOGY
RESEARCH AND DEVELOPMENT
PROGRAM

Many agencies working together toward a single goal—U.S. leadership in science, engineering, and technology through advanced information technology

NITRD

The Networking and Information Technology Research and Development (NITRD) Program is the Nation's primary source of revolutionary breakthroughs in advanced information technologies such as computing, networking, and software

A unique collaboration of more than a dozen Federal research agencies, the NITRD Program seeks to:

- Assure continued U.S. leadership in information technologies to meet Federal goals and support U.S. 21st century government, academic, and industrial interests
- Accelerate deployment of advanced and experimental information technologies to enhance national security; maintain world leadership in science, engineering, and mathematics; improve the quality of life; promote long-term economic growth; increase lifelong learning; and protect the environment
- Advance U.S. productivity and competitiveness through long-term scientific and engineering research in information technology

The NITRD Program stems from the High-Performance Computing (HPC) Act of 1991 (Public Law 102-194) as amended by the Next Generation Internet Research Act of 1998 (Public Law 105-305). These laws authorize Federal agencies to set goals and prioritize their investments in information technology research and development (IT R&D)—including high-end computing systems, software, and applications; advanced networking; software design for assurance, reliability, and security; human-computer interaction; information management technologies; societal impacts of IT; and IT workforce development. The laws also authorize establishment of the President's Information Technology Advisory Committee (PITAC).

NITRD Program activities are coordinated by the NITRD Subcommittee, which reports to the Committee on Technology of the National Science and Technology Council (NSTC). The Subcommittee comprises senior IT R&D managers from participating agencies and representatives from the NSTC, the Office of Management and Budget (OMB), and the National Coordination Office (NCO) for IT R&D.

The seven major technical areas of NITRD investments, called Program Component Areas (PCAs), are defined and structured by the Subcommittee to target key research goals, as follows:

High-End Computing Infrastructure and Applications (HEC I&A)—to extend the state of the art in high-end computing systems, science and engineering applications, data management, and infrastructure

High-End Computing Research and Development (HEC R&D)—to optimize the performance of high-end computing systems and develop future generations of HEC systems to address Federal and national needs

Human Computer Interaction and Information Management (HCI&IM)—to develop new user interaction technologies, cognitive systems, information systems, and robotics that benefit humans

Large Scale Networking (LSN)—to develop leading-edge network technologies (such as optical, wireless, and hybrid), services, and techniques to enhance performance, security, and scalability

Software Design and Productivity (SDP)—to advance concepts, methods, techniques, and tools that improve software design, development, and maintenance to produce more usable, dependable, and cost-effective software-based systems

High Confidence Software and Systems (HCSS)—to develop the scientific foundations and IT to achieve affordable and predictable high levels of safety, security, reliability, and survivability, especially in U.S. national security and safety-critical systems

Social, Economic, and Workforce Implications of IT and IT Workforce Development (SEW)—to study the impact of IT on people and social and economic systems, develop the IT workforce, and foster innovative IT applications in education and training

An Interagency Working Group (IWG) or a Coordinating Group (CG) of agency program managers associated with each PCA plans collaborative activities, coordinates agency investments, and assesses R&D directions in that PCA. The HEC IWG covers both HEC PCAs. IWG and CG activities include annual agency budget and program reviews; regular monthly meetings and ad hoc interest group meetings; conferences, workshops, and seminars; preparation of research needs and workshop reports; and contributions to the NITRD Program's annual Supplement to the President's Budget and to special documents such as the NITRD Grand Challenges report. The IWG and CGs report to the NITRD Subcommittee.

The NCO provides technical and administrative support to the NITRD Subcommittee, IWG, and CGs via its technical coordinators and administrative staff. The HPC Act authorizes these functions. Executive Order 13035 and its amendments authorize NCO support for the PITAC.

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